



Southwest Washington Seal and Sea Lion Haulout Sites

Region 1: Columbia River

Use NOAA Charts 18521 (Pacific Ocean to Harrington Point); 18523 (Harrington Point to Crims Island); and 18524 (Crims Island to Vancouver) for navigation and bathymetry details.

Large numbers of both Steller and California sea lions can be found seasonally at the tip of the South Jetty. California sea lions regularly are found upriver during the winter and spring using navigation buoys, jetty at the East Mooring Basin in Astoria, and at times on log booms in Carroll Slough near the mouth of the Cowlitz River. Small numbers of California sea lions are also frequently found upriver as far as Bonneville Dam and Willamette Falls.

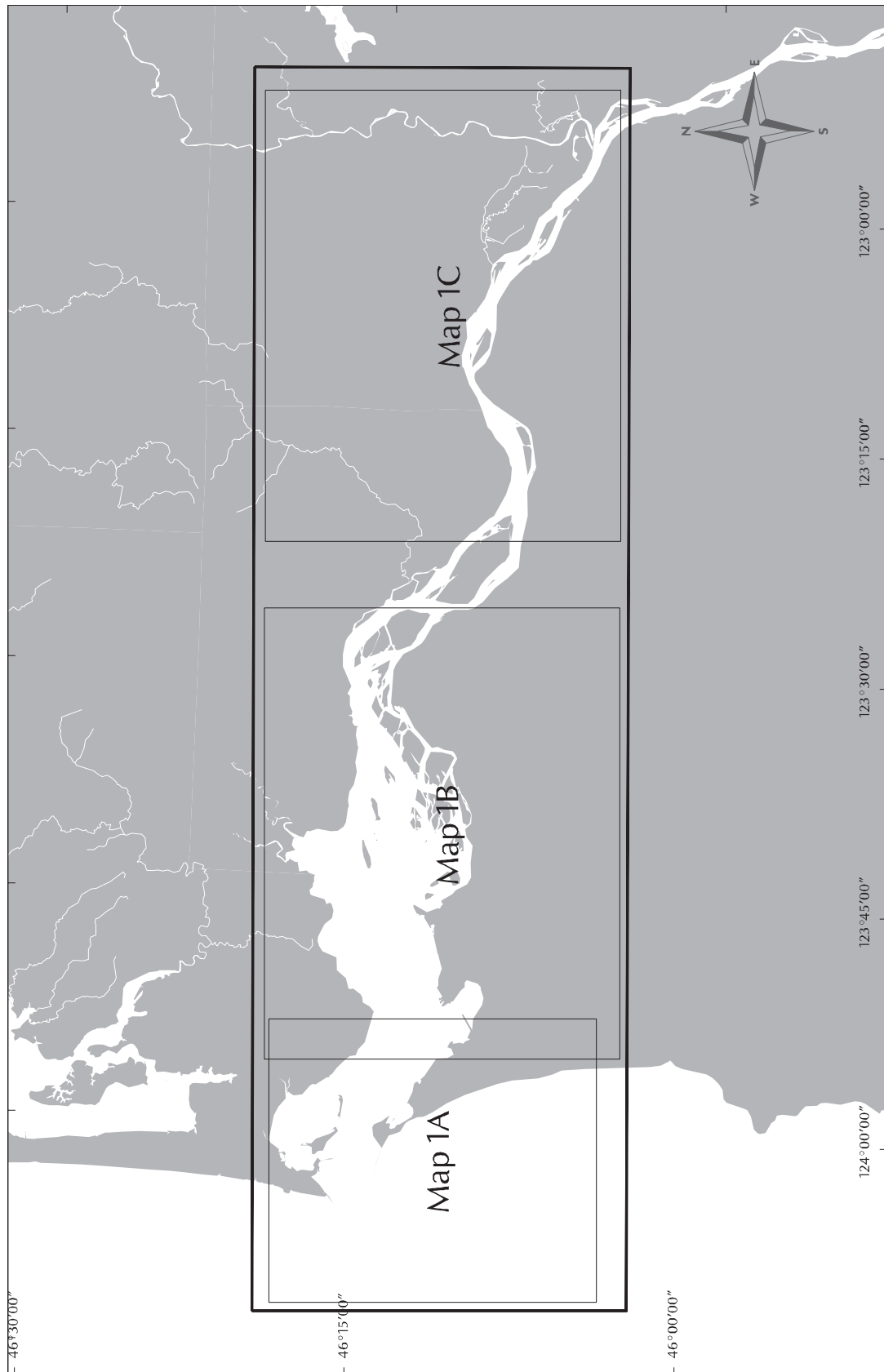
Numerous harbor seal haulout sites are found on intertidal mudflats and sand bars in the lower Columbia River. Nursery areas are present in Cathlamet Bay. Peak harbor seal abundances in the Columbia River occur during the winter and spring when a number of upriver haulout sites are used. Peak abundances and upriver movements in the winter and spring months are correlated with spawning runs of eulachon smelt and out migration of salmonid smolts. The harbor seal pupping season in the Columbia River occurs from mid-April through June.



Steller sea lions hauled out on tip of South Jetty, Columbia River, June 4, 1996.

Columbia River

Region 1: Mouth to Cowlitz River



Region 1: Columbia River

<u>ID</u>	<u>Location</u>	<u>Survey Code</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Count</u>	<u>Use</u>
1	Large Navigation Bouy	01.01	46 12.17	124 11.00	ZC,EJ	100-500	ALL
2	Tip of South Jetty	01.02	46 14.03	124 03.94	EJ,ZC,PV	100-500	ALL
3	Chinook/Baker Bay	01.03	46 15.90	123 57.89	PV	<100	LOW
4	Chinook/Baker Bay	01.03	46 15.74	123 57.63	PV	<100	LOW
5	Desdemona Sands	01.04	46 12.80	123 55.90	PV	100-500	LOW
6	Desdemona Sands	01.04	46 13.19	123 53.61	PV	<100	LOW
7	Desdemona Sands	01.04	46 12.73	123 53.33	PV	500>	LOW
8	Taylor Sands	01.05	46 14.20	123 48.40	PV	500>	LOW
9	Grays Bay	01.06	46 16.14	123 42.42	PV	<100	LOW
10	Grays Bay	01.06	46 16.71	124 43.54	PV	<100	LOW
11	Grays Bay	01.06	46 16.50	123 43.54	PV	<100	LOW
12	Cathlamet Bay	01.07	46 12.31	123 39.56	PV	100-500	LOW
13	Cathlamet Bay	01.07	46 12.99	123 41.74	PV	<100	LOW
14	Cathlamet Bay	01.07	46 12.86	123 40.50	PV	<100	LOW
15	Lower Woody/Snag Island	01.08	46 13.40	123 37.55	PV	<100	LOW
16	Lower Woody/Snag Island	01.08	46 13.95	123 37.10	PV	<100	LOW
17	Lower Woody/Snag Island	01.08	46 13.92	123 36.59	PV	<100	LOW
18	South of Miller Sands	01.09	46 13.87	123 38.84	PV	<100	LOW
19	Three Tree Point Area	01.10	46 15.77	123 30.85	PV	100-500	LOW
20	Three Tree Point Area	01.10	46 15.28	123 30.79	PV	100-500	LOW
21	NE of Welch Island	01.11	46 14.99	123 27.03	PV	<100	LOW
22	Wallace Island/Eureka Bar	01.12	46 08.74	123 16.04	PV	<100	LOW
23	Wallace Island/Eureka Bar	01.12	46 08.91	123 15.26	PV	<100	LOW
24	Cowlitz River/Carroll Slough	01.13	46 05.98	122 54.34	PV,ZC	100-500	LOW
25	Cowlitz River/Carroll Slough	01.13	46 05.53	122 53.66	ZC	<100	LOW
26	Tongue Point Sands	01.14	46 13.88	123 45.86	PV	500>	LOW
27	Tongue Point Sands	01.14	46 14.08	123 45.16	PV	<100	LOW
28	E Puget Island	01.15	46 08.95	123 18.76	PV	100-500	LOW
29	Astoria/E Mooring Basin	01.16	46 11.80	123 47.95	ZC	100-500	ALL



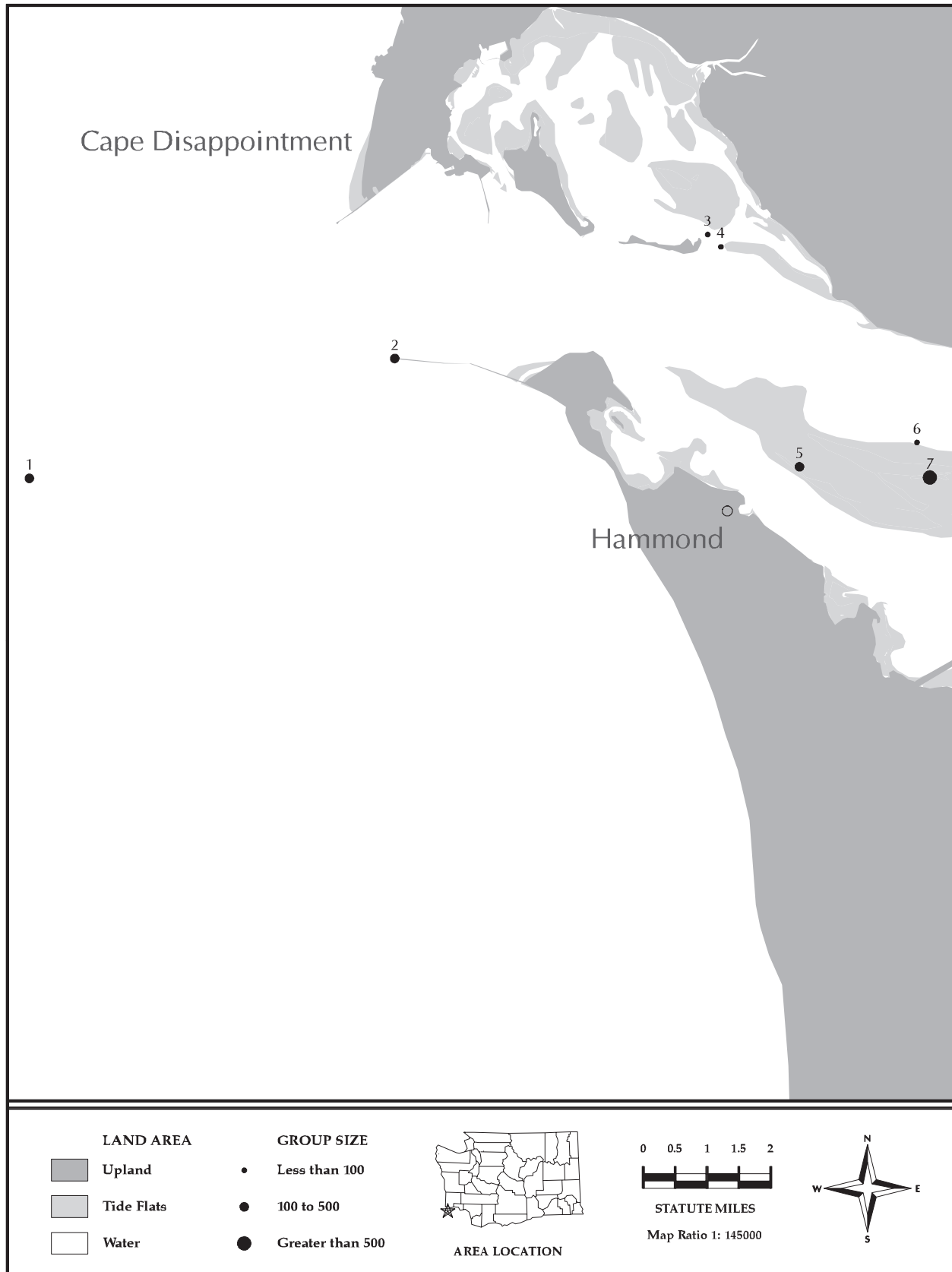
Region 1: Columbia River

<u>ID</u>	<u>Description</u>
1	Offshore navigation bouy (LNB) removed in early 1990's.
2	Year round on concrete slabs and rock rubble. Abandoned during high ocean swell.
3	Chinook Channel area. Intermittent use at low tides.
4	On shoals northwest of entrance channel. Intermittent use at low tides.
5	Shoal to the west of Astoria/Megler bridge. Alternate site used intermittently.
6	Shoals west of Astoria/Megler bridge. Alternate site used intermittently on extreme low tides.
7	Shoals west of Astoria/Megler bridge. Main lower river haulout.
8	Shoals north of Taylor Sands channel. Used extensively in 1980's.
9	Intermittent use of shoal area.
10	Year round on intertidal sand bars.
11	Year round on intertidal sand bars.
12	Exposed channels along Sanborn Slough.
13	Along shoals west of Green Island. Intermittent during pupping season.
14	Exposed channels north of Green Island during pupping season. Nursery area.
15	Shoals southwest of Snag Island.
16	Along northeast side of Snag Island (near line of pilings).
17	Shoals in lower Woody Island channel.
18	Along shoals on south side during winter and early spring.
19	On shoal just downriver from line of range markers during winter and spring.
20	Along north side of Grassy Island during winter and spring.
21	On shoal along northeast side of island during winter and spring.
22	Along edge of unnamed island south of Waterford during spring and winter.
23	Shoals south of Cooper Point along lower Eureka Channel during spring and winter.
24	Shoals near confluence with Columbia River during winter and spring.
25	Log booms anchored along Carroll Channel used intermittently during winter and spring.
26	Along northwest side of shoal during winter and spring.
27	Shoals upriver from main shoal area.
28	Upriver end of Puget Island during winter and spring.
29	On marina floats and upriver jetty near processing plant from late fall through spring.



Columbia River

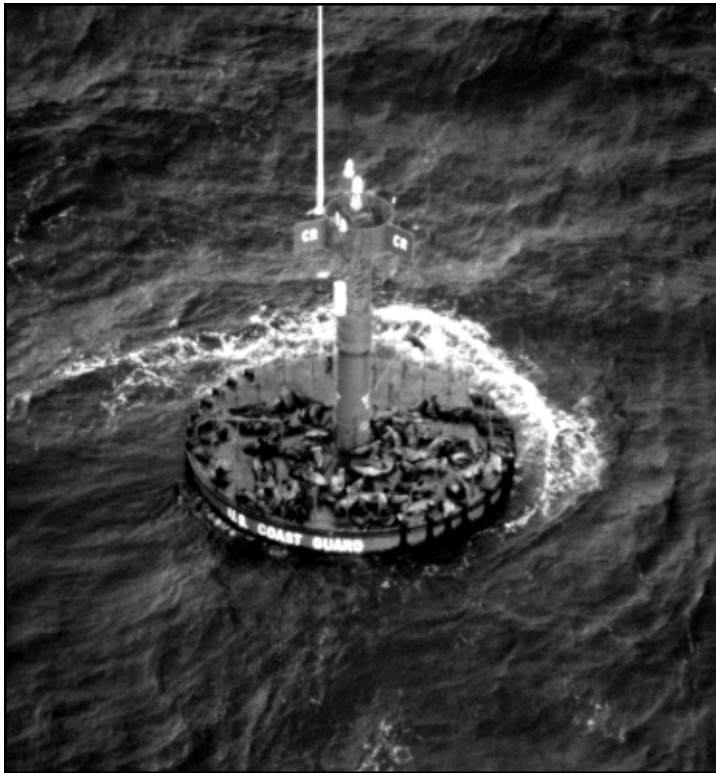
Map 1A: Large Navigation Bouy to Desdemona Sands



Columbia River

Map 1A: Large Navigation Bouy to Desdemona Sands

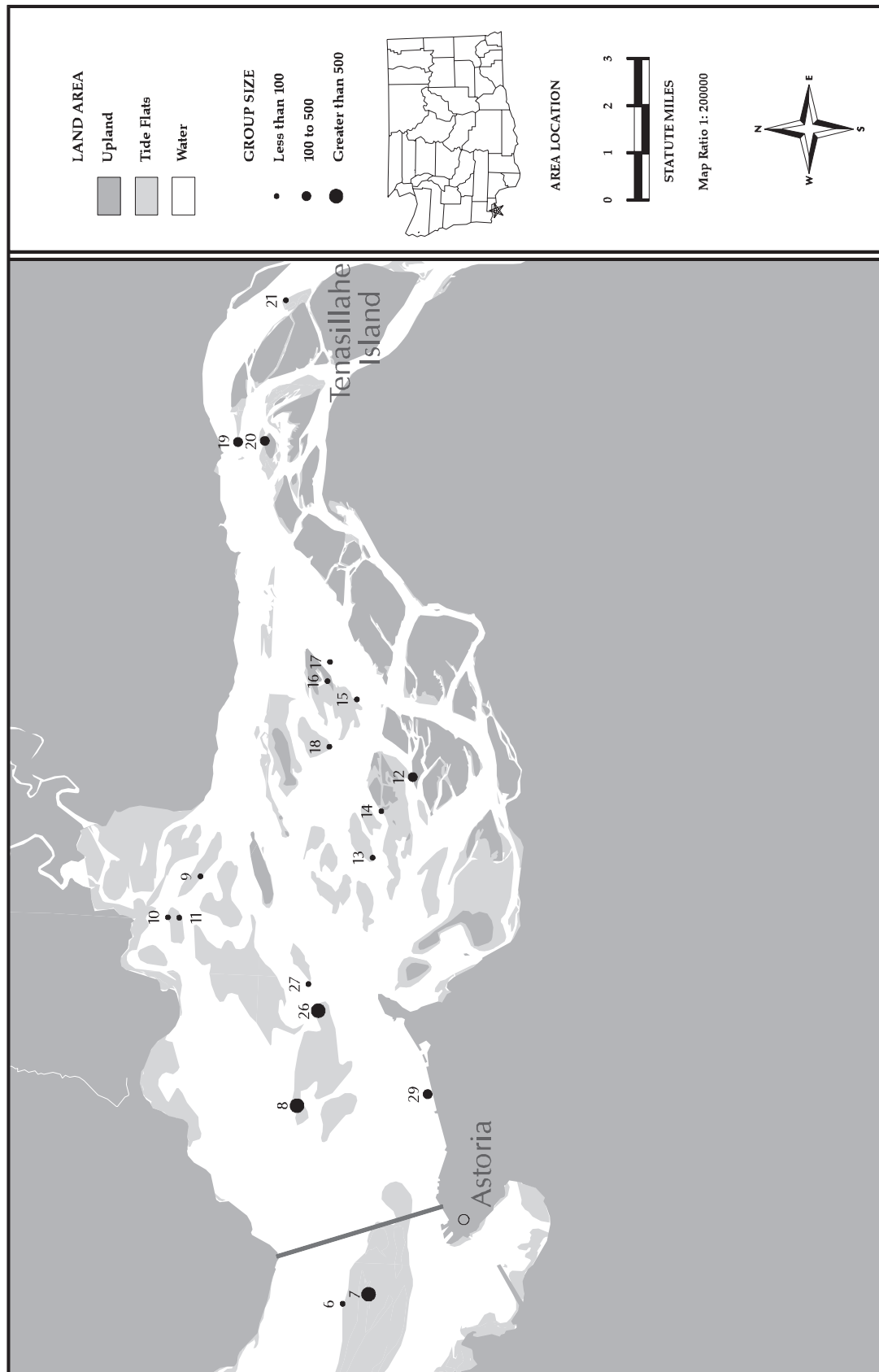
<u>ID</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
1	Large Navigation Bouy	46 12.17	124 11.00	ZC,EJ	Offshore navigation bouy (LNB) removed in early 1990's.
2	Tip of South Jetty	46 14.03	124 03.94	EJ,ZC,PV	Year round on concrete slabs and rock rubble. Abandoned during high ocean swell.
3	Chinook/Baker Bay	46 15.90	123 57.89	PV	Chinook Channel area. Intermittent use at low tides.
4	Chinook/Baker Bay	46 15.74	123 57.63	PV	On shoals northwest of entrance channel. Intermittent use at low tides.
5	Desdemona Sands	46 12.80	123 55.90	PV	Shoal to the west of Astoria/Megler bridge. Alternate site used intermittently.
6	Desdemona Sands	46 13.19	123 53.61	PV	Shoals west of Astoria/Megler bridge. Alternate site used intermittently on extreme low tides.
7	Desdemona Sands	46 12.73	123 53.33	PV	Shoals west of Astoria/Megler bridge. Main lower river haulout.



Steller sea lions hauled out on Large Navigation Bouy (LNB), Columbia River, December 16, 1991.

Columbia River

Map 1B: Desdemona Sands to Tenasillahe Island



Columbia River

Map 1B: Desdemona Sands to Tenasillahe Island

ID	Location	Latitude	Longitude	Species	Description
6	Desdemona Sands	46 13.19	123 53.61	PV	Shoals west of Astoria/Megler bridge. Alternate site used intermittently on extreme low tides.
7	Desdemona Sands	46 12.73	123 53.33	PV	Shoals west of Astoria/Megler bridge. Main lower river haulout.
8	Taylor Sands	46 14.20	123 48.40	PV	Shoals north of Taylor Sands channel. Used extensively in 1980's.
9	Grays Bay	46 16.14	123 42.42	PV	Intermittent use of shoal area.
10	Grays Bay	46 16.71	123 43.54	PV	Year round on intertidal sand bars.
11	Grays Bay	46 16.50	123 43.54	PV	Year round on intertidal sand bars.
12	Cathlamet Bay	46 12.31	123 39.56	PV	Exposed channels along Sanborn Slough.
13	Cathlamet Bay	46 12.99	123 41.74	PV	Along shoals west of Green Island. Intermittent during pupping season.
14	Cathlamet Bay	46 12.86	123 40.50	PV	Exposed channels north of Green Island during pupping season. Nursery area.
15	Lower Woody/Snag Island	46 13.40	123 37.55	PV	Shoals southwest of Snag Island.
16	Lower Woody/Snag Island	46 13.95	123 37.10	PV	Along northeast side of Snag Island (near line of pilings).
17	Lower Woody/Snag Island	46 13.92	123 36.59	PV	Shoals in lower Woody Island channel.
18	South of Miller Sands	46 13.87	123 38.84	PV	Along shoals on south side during winter and early spring.
19	Three Tree Point Area	46 15.77	123 30.85	PV	On shoal just downriver from line of range markers during winter and spring.
20	Three Tree Point Area	46 15.28	123 30.79	PV	Along north side of Grassy Island during winter and spring.
21	NE of Welch Island	46 14.99	123 27.03	PV	On shoal along northeast side of island during winter and spring.
26	Tongue Point Sands	46 13.88	123 45.86	PV	Along northwest side of shoal during winter and spring.
27	Tongue Point Sands	46 14.08	123 45.16	PV	Shoals upriver from main shoal area.
29	Astoria/E Mooring Basin	46 11.80	123 47.95	ZC	On marina floats and upriver jetty near processing plant from late fall through spring.

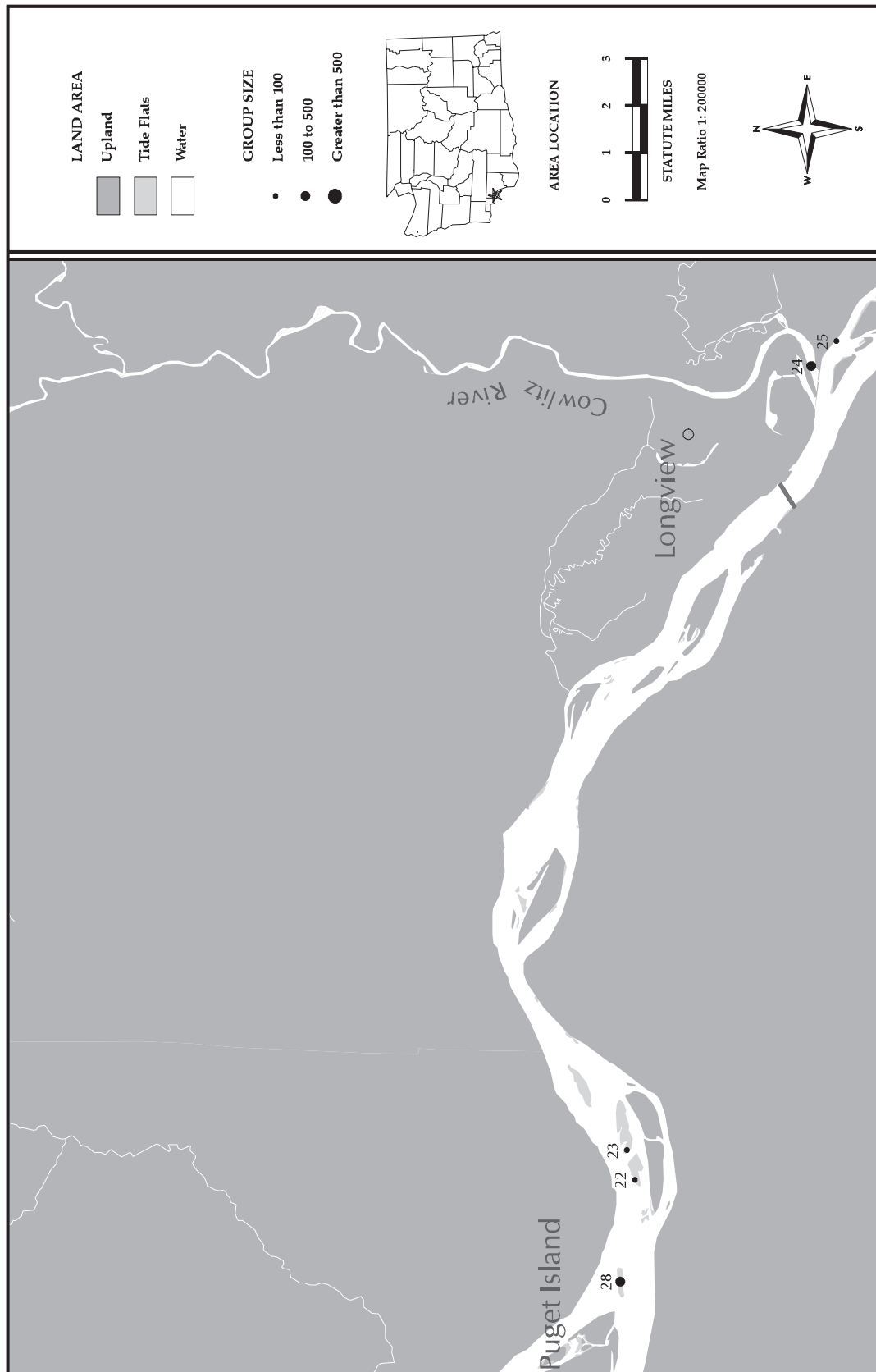


Harbor seals hauled out on intertidal shoal in Grays Bay, Columbia River, May 7, 1996.



Columbia River

Map 1C: Puget Island to Cowlitz River Mouth



Columbia River

Map 1C: Puget Island to Cowlitz River Mouth

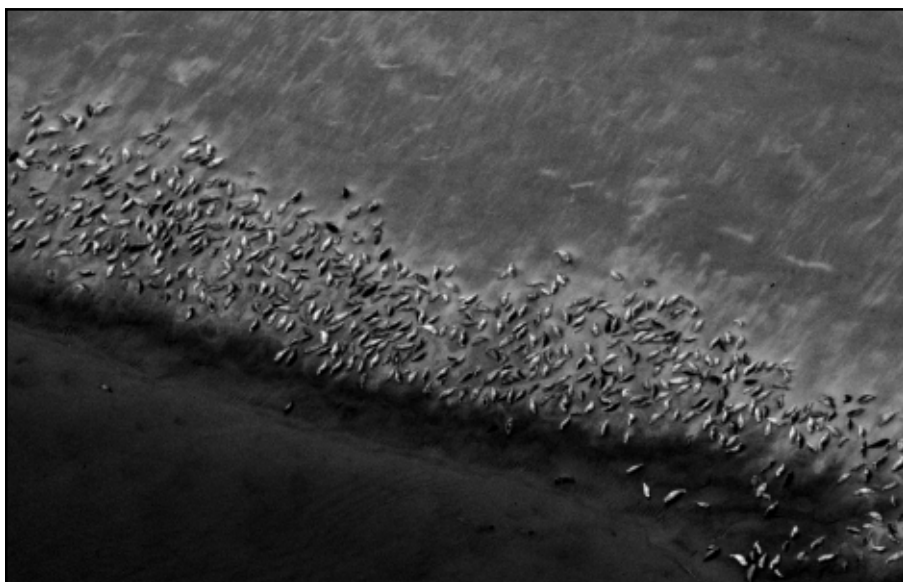
<u>ID</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
22	Wallace Island/Eureka Bar	4608.74	123 16.04	PV	Along edge of unnamed island south of Waterford during spring and winter.
23	Wallace Island/Eureka Bar	4608.91	123 15.26	PV	Shoals south of Cooper Point along lower Eureka Channel during spring and winter.
24	Cowlitz R/Carroll Slough	4605.98	122 54.34	PV,ZC	Shoals near confluence with Columbia River during winter and spring.
25	Cowlitz R/Carroll Slough	4605.53	122 53.66	ZC	Log booms anchored along Carroll Channel used intermittently during winter and spring.
28	E Puget Island	4608.95	123 18.76	PV	Upriver end of Puget Island during winter and spring.



Region 2: Willapa Bay

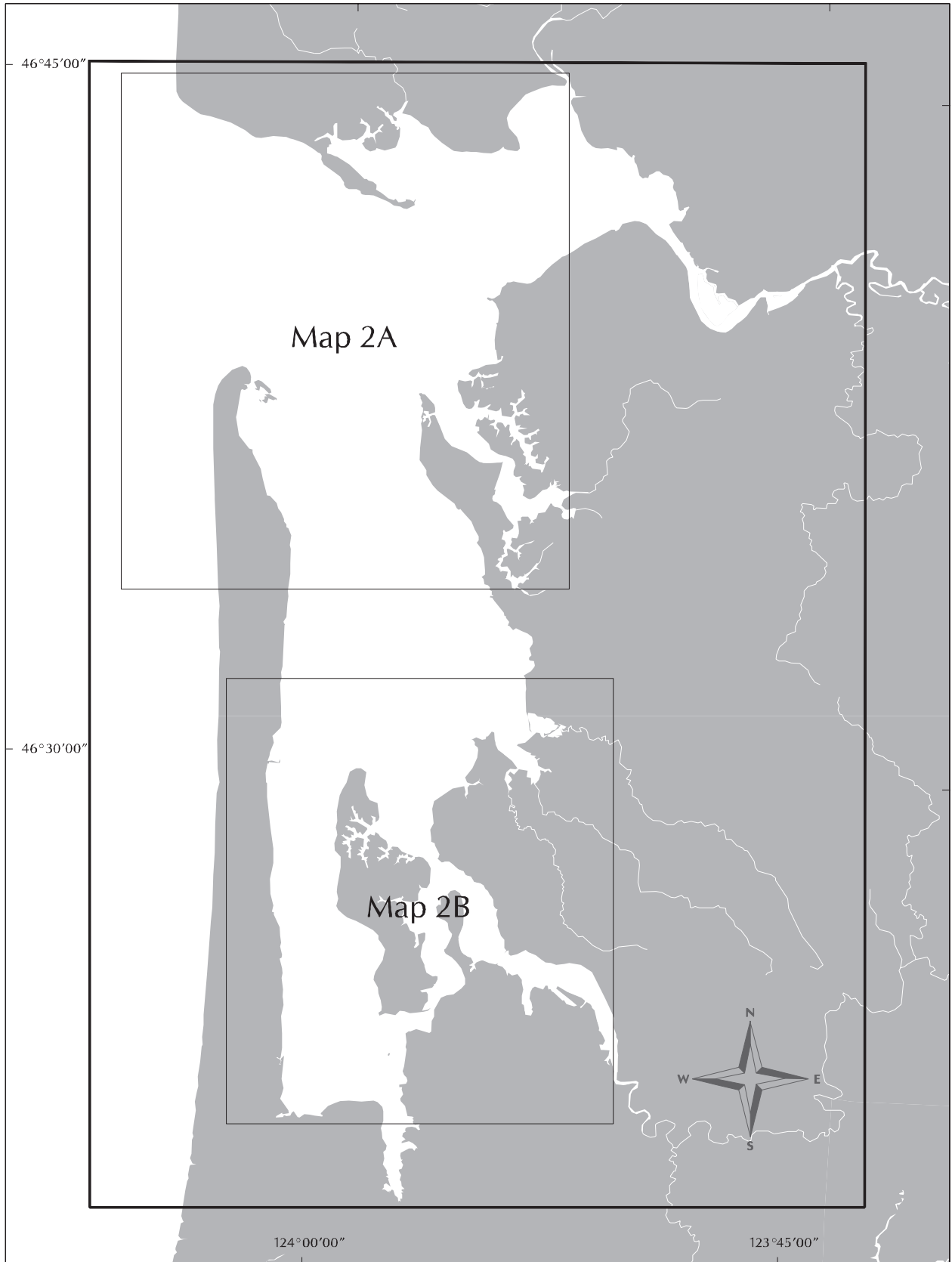
Use NOAA Charts 18504 (Willapa Bay) for navigation and bathymetry details.

Numerous harbor seal haulout sites are located on intertidal mudflats and sand bars throughout Willapa Bay. Nursery areas are located in the areas around Pine Island Channel, Ellen Sands, Shoalwater Bay, and northeast of Long Island. Peak harbor seal abundances occur during the pupping season (mid-April through June) and annual molt (July through August). Small numbers of California sea lions may be found seasonally in Willapa Bay.



Harbor seals hauled out on intertidal shoal off Leadbetter Point, Willapa Bay, June 4, 1996.

Willapa Bay Region 2



Region 2: Willapa Bay

<u>ID</u>	<u>Location</u>	<u>Survey Code</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Count</u>	<u>Use</u>
30	W Shoalwater Bay	02.01	4624.45	12400.05	PV	<100	LOW
31	W Shoalwater Bay	02.01	4624.54	12400.18	PV	<100	LOW
32	Shoalwater Bay Middle	02.02	4624.34	12359.32	PV	<100	LOW
33	SW of Long Island	02.03	4625.64	12358.87	PV	<100	LOW
34	NE of Long Island South	02.04	4629.24	12356.83	PV	100-500	LOW
35	NE of Long Island Middle	02.05	4629.76	12357.38	PV	<100	LOW
36	NE of Long Island North	02.06	4630.79	12357.11	PV	<100	LOW
37	NE of Long Island North	02.06	4631.32	12356.89	PV	<100	LOW
38	Riddle Spit Area	02.07	4634.94	12400.60	PV	<100	LOW
39	S of Grassy Island	02.08	4637.06	12401.38	PV	<100	LOW
40	Ellen Sands	02.09	4638.72	12358.10	PV	<100	LOW
41	Ellen Sands	02.09	4639.11	12359.23	PV	<100	LOW
42	Ellen Sands	02.09	4639.74	12359.27	PV	<100	LOW
43	Ellen Sands	02.09	4640.58	12359.05	PV	<100	LOW
44	Pine Island Channel	02.10	4640.98	12357.64	PV	100-500	LOW
45	Pine Island Channel	02.10	4640.74	12357.67	PV	100-500	LOW
46	Pine Island Channel	02.10	4640.15	12356.95	PV	100-500	LOW
47	E of Toke Point	02.11	4642.63	12355.90	PV	<100	LOW
48	Entrance Shoals	02.12	4642.71	12403.04	PV	100-500	LOW
49	Entrance Shoals	02.12	4641.71	12402.00	PV	100-500	LOW
50	Entrance Shoals	02.12	4640.42	12400.74	PV	100-500	LOW
51	Entrance Shoals	02.12	4641.63	12405.73	PV	<100	LOW
52	Entrance Shoals	02.12	4640.65	12406.03	PV	<100	LOW
53	Leadbetter Shoals	02.13	4639.93	12403.22	PV	<100	LOW
54	Leadbetter Shoals	02.13	4638.36	12400.89	PV	100-500	LOW
55	Leadbetter Shoals	02.13	4639.83	12402.47	PV	<100	LOW
56	Leadbetter Shoals	02.13	4639.42	12402.21	PV	100-500	LOW



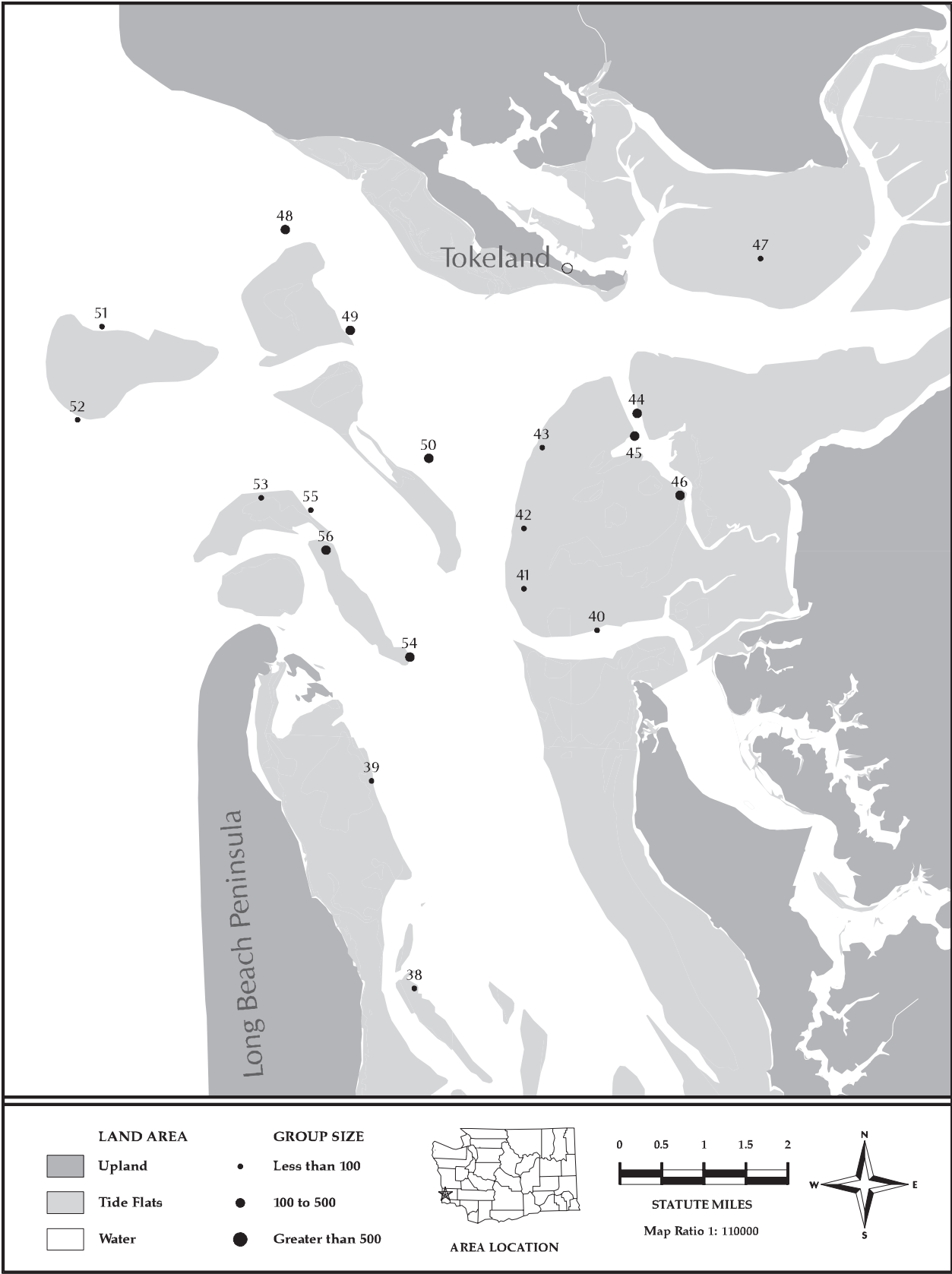
Region 2: Willapa Bay

<u>ID</u>	<u>Description</u>
30	Areas along channels on west side of Shoalwater Bay.
31	Areas along channels in west Shoalwater Bay during pupping season.
32	Areas along channels in middle Shoalwater Bay during pupping season.
33	Areas along channels southwest of Long Island during pupping season.
34	Areas along south channel. Nursery area.
35	Areas along the middle channel.
36	Areas along the north channels during pupping season.
37	Along the northern most channel with house on pilings during pupping season.
38	Intertidal areas along edge of shoal.
39	On shoals south of Grassy Island during pupping season.
40	Intertidal sand flats along Ellen Sands. Nursery area.
41	Intertidal sand flats along Ellen Sands. Nursery area.
42	Intertidal sand flats along Ellen Sands. Nursery area.
43	Intertidal sand flats along Ellen Sands. Nursery area.
44	Shoals along Pine Island channel.
45	Shoals along Pine Island channel.
46	Shoals along Pine Island channel during pupping season. Nursery area.
47	Shoals along channels east of Toke Point.
48	Along north side of main shoal in entrance to Willapa Bay.
49	Along south side of main shoal in entrance to Willapa Bay.
50	On southeast shoal in entrance to Willapa Bay.
51	On southwest shoals in entrance to Willapa Bay during pupping season.
52	On south shoals in entrance to Willapa Bay during the pupping season.
53	Along shoals north of Leadbetter Point during pupping season.
54	Shoals southeast of Leadbetter Point.
55	Shoals northeast of Leadbetter Point during pupping season.
56	On shoals east of Leadbetter Point.



Willapa Bay

Map 2A: Willapa Bay-North



Willapa Bay

Map 2A: Willapa Bay-North

ID	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
38	Riddle Spit Area	4634.94	12400.60	PV	Intertidal areas along edge of shoal.
39	S of Grassy Island	4637.06	12401.38	PV	On shoals south of Grassy Island during pupping season.
40	Ellen Sands	4638.72	12358.10	PV	Intertidal sand flats along Ellen Sands. Nursery area.
41	Ellen Sands	4639.11	12359.23	PV	Intertidal sand flats along Ellen Sands. Nursery area.
42	Ellen Sands	4639.74	12359.27	PV	Intertidal sand flats along Ellen Sands. Nursery area.
43	Ellen Sands	4640.58	12359.05	PV	Intertidal sand flats along Ellen Sands. Nursery area.
44	Pine Island Channel	4640.98	12357.64	PV	Shoals along Pine Island channel.
45	Pine Island Channel	4640.74	12357.67	PV	Shoals along Pine Island channel.
46	Pine Island Channel	4640.15	12356.95	PV	Shoals along Pine Island channel during pupping season. Nursery area.
47	E of Toke Point	4642.63	12355.90	PV	Shoals along channels east of Toke Point.
48	Entrance Shoals	4642.71	12403.04	PV	Along north side of main shoal in entrance to Willapa Bay.
49	Entrance Shoals	4641.71	12402.00	PV	Along south side of main shoal in entrance to Willapa Bay.
50	Entrance Shoals	4640.42	12400.74	PV	On southeast shoal in entrance to Willapa Bay.
51	Entrance Shoals	4641.63	12405.73	PV	On southwest shoals in entrance to Willapa Bay during pupping season.
52	Entrance Shoals	4640.65	12406.03	PV	On south shoals in entrance to Willapa Bay during the pupping season.
53	Leadbetter Shoals	4639.93	12403.22	PV	Along shoals north of Leadbetter Point during pupping season.
54	Leadbetter Shoals	4638.36	12400.89	PV	Shoals southeast of Leadbetter Point.
55	Leadbetter Shoals	4639.83	12402.47	PV	Shoals northeast of Leadbetter Point during pupping season.
56	Leadbetter Shoals	4639.42	12402.21	PV	On shoals east of Leadbetter Point.



Willapa Bay

Map 2B: Willapa Bay-South



Willapa Bay

Map 2B: Willapa Bay-South

<u>ID</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
30	W Shoalwater Bay	4624.45	12400.05	PV	Areas along channels on west side of Shoalwater Bay.
31	W Shoalwater Bay	4624.54	12400.18	PV	Areas along channels in west Shoalwater Bay during pupping season.
32	Shoalwater Bay Middle	4624.34	12359.32	PV	Areas along channels in middle Shoalwater Bay during pupping season.
33	SW of Long Island	4625.64	12358.87	PV	Areas along channels southwest of Long Island during pupping season.
34	NE of Long Island South	4629.24	12356.83	PV	Areas along south channel. Nursery area.
35	NE of Long Island Middle	4629.76	12357.38	PV	Areas along the middle channel.
36	NE of Long Island North	4630.79	12357.11	PV	Areas along the north channels during pupping season.
37	NE of Long Island North	4631.32	12356.89	PV	Along the northern most channel with house on pilings during pupping season.



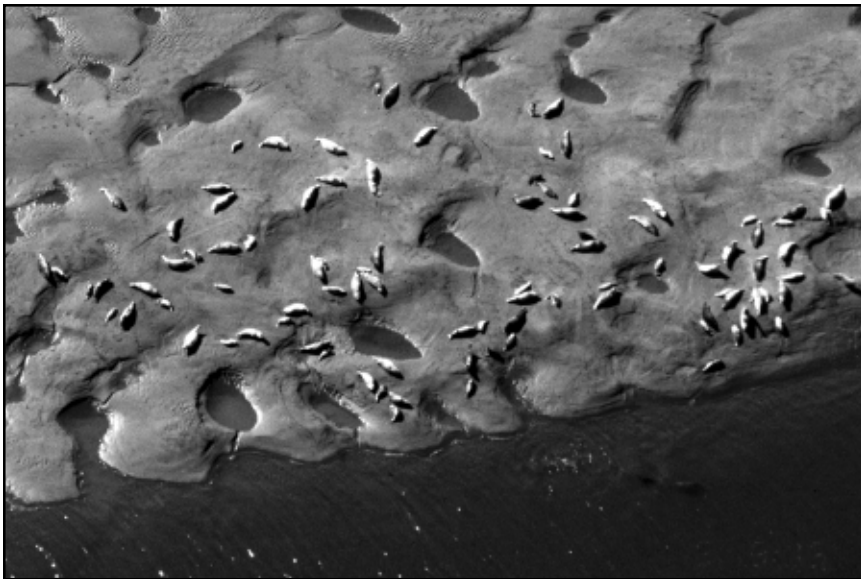
Harbor seals hauled out along channel in Shoalwater Bay, June 4, 1992.



Region 3: Grays Harbor

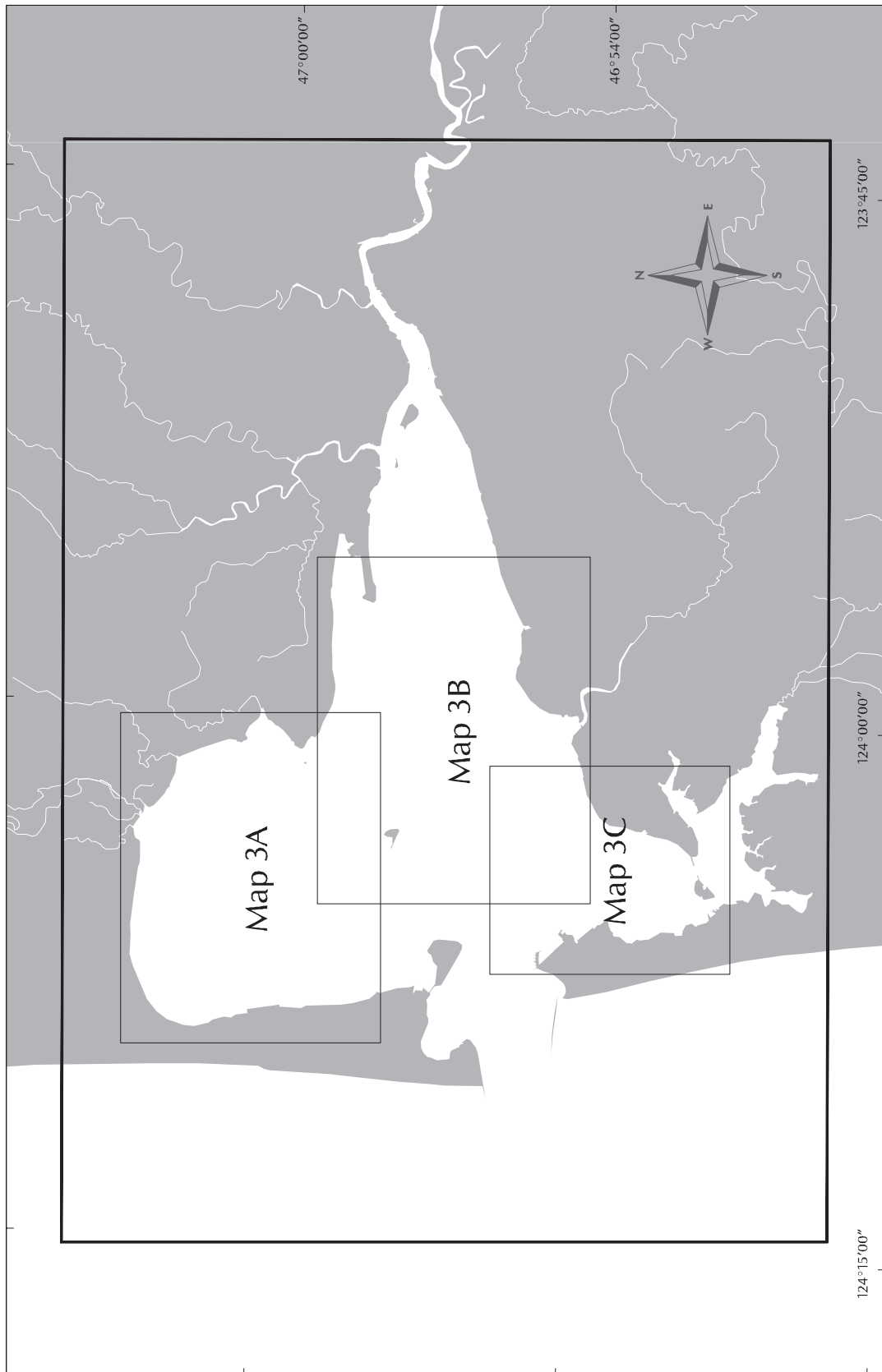
Use NOAA Charts 18502 (Grays Harbor) for navigation and bathymetry details.

Numerous harbor seal haulout sites are located on intertidal mudflats and sand bars throughout Grays Harbor. Nursery areas are located in the areas around Whitcomb Flats, Mid-Harbor Flats, Sand Island shoals, Sand Island, Goose Island, Chenoise Creek channels, and in North Bay. Peak harbor seal abundances occur during the pupping season (mid-April through June) and the annual molt (July through August). Small numbers of California sea lions may be found seasonally in Grays Harbor foraging or on docks in the Westport Marina.



Harbor seals hauled out on intertidal shoal in Grays Harbor, June 5, 1996.

Grays Harbor Region 3



Region 3: Grays Harbor

<u>ID</u>	<u>Location</u>	<u>Survey Code</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Count</u>	<u>Use</u>
57	South Bay	03.01	4652.83	12404.08	PV	<100	LOW
58	Whitcomb Flats N	03.02	4654.98	12404.64	PV	100-500	LOW
59	E of Whitcomb Flats	03.03	4655.04	12402.27	PV	<100	LOW
60	E of Whitcomb Flats	03.03	4654.81	12403.02	PV	<100	LOW
61	E of Whitcomb Flats	03.03	4654.43	12402.88	PV	<100	LOW
62	Midharbor Flats	03.04	4656.93	12358.42	PV	<100	LOW
63	Midharbor Flats	03.04	4656.32	12359.94	PV	100-500	LOW
64	Midharbor Flats	03.04	4656.11	12356.89	PV	<100	LOW
65	Sand Island Shoals	03.05	4657.35	12359.81	PV	100-500	LOW
66	Sand Island Shoals Area	03.05	4657.50	12359.92	PV	100-500	LOW
67	Sand Island Shoals Area	03.06	4656.88	12401.13	PV	<100	LOW
68	Sand Island Shoals Area	03.06	4656.91	12401.61	PV	500>	LOW
69	Sand Island Shoals Area	03.07	4657.11	12402.05	PV	<100	LOW
70	Sand Island Shoals Area	03.07	4657.19	12401.42	PV	<100	LOW
71	Sand Island Shoals Area	03.07	4656.71	12402.15	PV	500>	LOW
72	Sand Island Shoals Area	03.07	4656.45	12402.81	PV	<100	LOW
73	Sand Island Shoals Area	03.08	4657.03	12402.42	PV	<100	LOW
74	S Side of Sand Island	03.09	4657.38	12402.90	PV	100-500	LOW
75	S of Sand Island	03.09	4657.58	12403.07	PV	100-500	LOW
76	S Side of Sand Island	03.09	4657.26	12403.31	PV	100-500	LOW
77	S Side of Sand Island	03.09	4658.03	12402.09	PV	<100	LOW
78	S Side of Sand Island	03.09	4657.61	12403.40	PV	<100	LOW
79	N Side of Sand Island	03.10	4657.82	12403.37	PV	100-500	LOW
80	NW of Sand Island	03.11	4658.01	12403.83	PV	100-500	LOW
81	NW of Sand Island	03.11	4657.68	12403.99	PV	<100	LOW
82	S Side of Goose Island	03.12	4658.56	12403.85	PV	100-500	LOW
83	NW End of Goose Island	03.13	4658.91	12404.27	PV	<100	LOW
84	East Bay/Chenoi Creek	03.14	4659.93	12402.78	PV	<100	LOW
85	East Bay/Chenoi Creek	03.14	4701.47	12402.73	PV	<100	LOW
86	East Bay/Chenoi Creek	03.14	4701.39	12402.09	PV	<100	LOW
87	East Bay/Chenoi Creek	03.14	4700.79	12402.06	PV	<100	LOW
88	East Bay/Chenoi Creek	03.14	4700.45	12402.32	PV	<100	LOW
89	East Bay/Small Channel	03.15	4700.27	12402.92	PV	100-500	LOW
90	East Bay/Main Channel	03.16	4700.78	12403.05	PV	<100	LOW
91	Shoals NW of Goose Island	03.17	4659.23	12404.66	PV	<100	LOW
92	Shoals NW of Goose Island	03.17	4659.65	12405.98	PV	100-500	LOW
93	Shoals E of Ocean Shores	03.18	4658.09	12407.59	PV	100-500	LOW
94	N of Campbell Slough	03.19	4700.45	12405.91	PV	<100	LOW
95	North Bay/West Channel	03.20	4701.15	12406.59	PV	100-500	LOW
96	North Bay/West Channel	03.20	4701.54	12407.01	PV	<100	LOW
97	North Bay/West Channel	03.20	4700.82	12405.89	PV	100-500	LOW
98	North Bay/East Channel	03.21	4701.92	12405.54	PV	<100	LOW
99	North Bay/East Channel	03.21	4701.55	12405.72	PV	100-500	LOW
100	North Bay/East Channel	03.21	4701.21	12405.45	PV	<100	LOW
101	North Bay/NW Channel	03.22	4701.36	12408.17	PV	<100	LOW



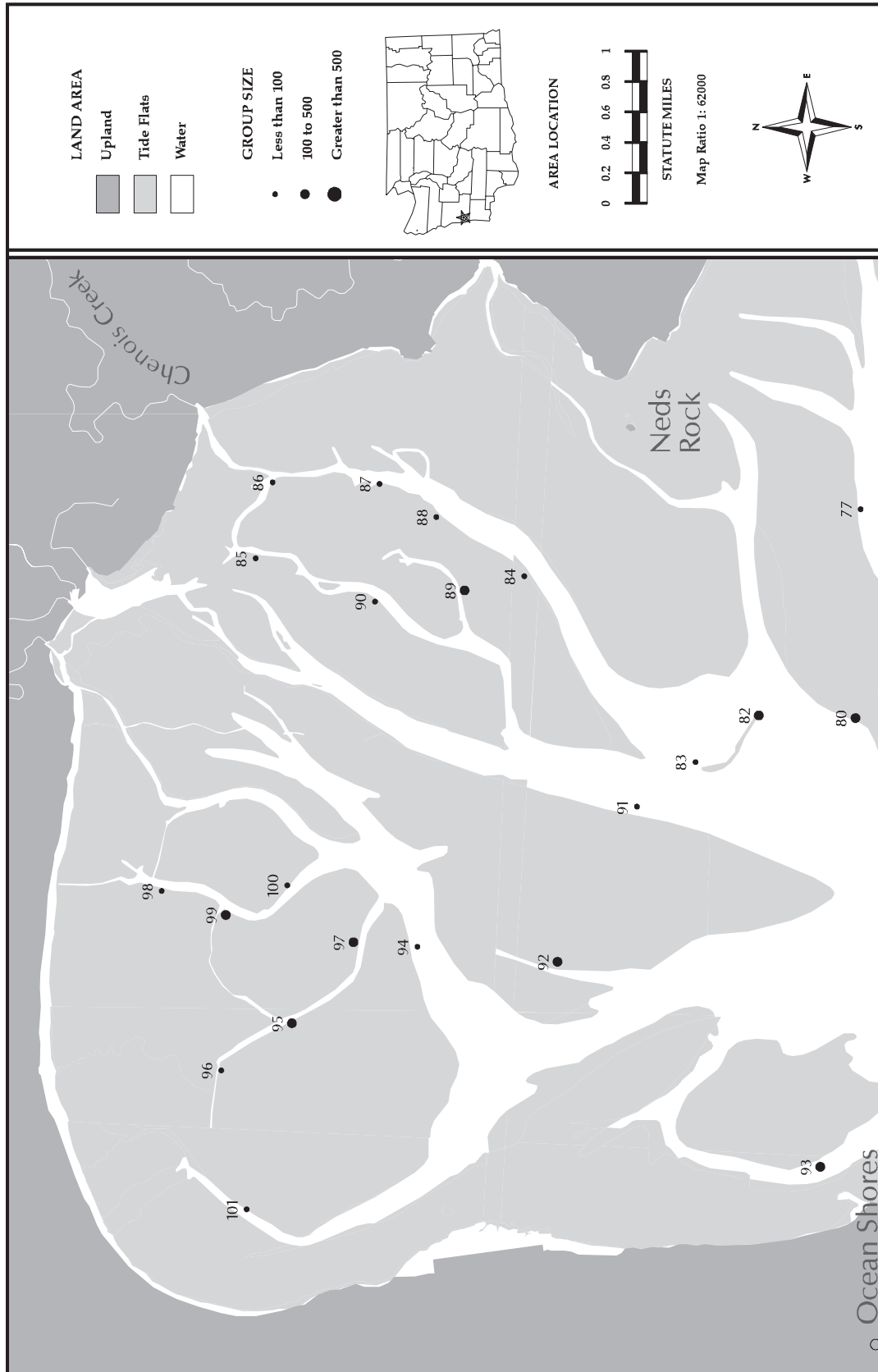
Region 3: Grays Harbor

<u>ID</u>	<u>Description</u>
57	Along intertidal channels on east side of bay.
58	Along north side of Whitcomb Flats.
59	Along south side of shoal east of Whitcomb Flats during pupping season.
60	Along south side of shoal east of Whitcomb Flats during pupping season.
61	On shoal southeast of Whitcomb Flats.
62	On shoals on north side of midharbor flats during pupping season.
63	On shoals on northwest side of midharbor flats during pupping season. Nursery area.
64	Shoals along south side of midharbor flats during pupping season.
65	On east side of shoal near rangefinders during pupping season. Nursery area.
66	On north side of shoal near rangefinders during pupping season.
67	On south side of south shoal during pupping season.
68	On north side of south shoal.
69	On north side of middle shoal during pupping season.
70	Along southeast side of middle shoal during pupping season.
71	Along south side of middle shoal.
72	Along southwest side of middle shoal during pupping season.
73	On south side of the north shoal during pupping season.
74	Shoals across channel on south side of island. Nursery area.
75	Along channel on south side of island. Nursery area.
76	Along channel on south side of island. Nursery area.
77	Along channel on south side of island. Nursery area.
78	Along channel on south side of island. Nursery area.
79	Along channel on north side of island. Nursery area.
80	On northwest tip of Sand Island.
81	Shoals west of Sand Island during pupping season.
82	Along channel on the south side of Goose Island. Nursery area.
83	Northwest tip of Goose Island during pupping season.
84	Along Chenois Creek channel during pupping season.
85	Along Chenois Creek channel during pupping season.
86	Along Chenois Creek channel during pupping season.
87	Along Chenois Creek channel during pupping season.
88	Along Chenois Creek channel during pupping season.
89	Along small deadend channel in East Bay. Nursery area.
90	Along main channel in East Bay during pupping season.
91	Along channel in shoals northwest of Goose Island during pupping season.
92	Along channel in shoal northwest of Goose Island.
93	Shoals along channel east of Oyehut/Ocean Shores. Nursery area.
94	Mud flats along Campbell Slough during pupping season.
95	Mud flats along the west channel into North Bay. Nursery area.
96	Mud flats along the west channel into North Bay. Nursery area.
97	Mud flats along the west channel into North Bay. Nursery area.
98	Mud flats along the east channel into North Bay. Nursery area.
99	Mud flats along the east channel into North Bay.
100	Mud flats along the east channel into North Bay. Nursery area.
101	Mud flats along the northwest most channel into North Bay during pupping season.



Grays Harbor

Map 3A: Grays Harbor-North



Grays Harbor

Map 3A: Grays Harbor-North

ID	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
77	S Side of Sand Island	4658.03	12402.09	PV	Along channel on south side of island. Nursery area.
80	NW of Sand Island	4658.01	12403.83	PV	On northwest tip of Sand Island.
82	S Side of Goose Island	4658.56	12403.85	PV	Along channel on the south side of Goose Island. Nursery area.
83	NW End of Goose Island	4658.91	12404.27	PV	Northwest tip of Goose Island during pupping season.
84	East Bay/Chenois Creek	4659.93	12402.78	PV	Along Chenois Creek channel during pupping season.
85	East Bay/Chenois Creek	4701.47	12402.73	PV	Along Chenois Creek channel during pupping season.
86	East Bay/Chenois Creek	4701.39	12402.09	PV	Along Chenois Creek channel during pupping season.
87	East Bay/Chenois Creek	4700.79	12402.06	PV	Along Chenois Creek channel during pupping season.
88	East Bay/Chenois Creek	4700.45	12402.32	PV	Along Chenois Creek channel during pupping season.
89	East Bay/Small Channel	4700.27	12402.92	PV	Along small deadend channel in East Bay. Nursery area.
90	East Bay/Main Channel	4700.78	12403.05	PV	Along main channel in East Bay during pupping season.
91	Shoals NW of Goose Island	4659.23	12404.66	PV	Along channel in shoals northwest of Goose Island during pupping season.
92	Shoals NW of Goose Island	4659.65	12405.98	PV	Along channel in shoal northwest of Goose Island.
93	Shoals E of Ocean Shores	4658.09	12407.59	PV	Shoals along channel east of Oyehut/Ocean Shores. Nursery area.
94	N of Campbell Slough	4700.45	12405.91	PV	Mud flats along Campbell Slough during pupping season.
95	North Bay/West Channel	4701.15	12406.59	PV	Mud flats along the west channel into North Bay. Nursery area.
96	North Bay/West Channel	4701.54	12407.01	PV	Mud flats along the west channel into North Bay. Nursery area.
97	North Bay/West Channel	4700.82	12405.89	PV	Mud flats along the west channel into North Bay. Nursery area.
98	North Bay/East Channel	4701.92	12405.54	PV	Mud flats along the east channel into North Bay. Nursery area.
99	North Bay/East Channel	4701.55	12405.72	PV	Mud flats along the east channel into North Bay.
100	North Bay/East Channel	4701.21	12405.45	PV	Mud flats along the east channel into North Bay. Nursery area.
101	North Bay/NW Channel	4701.36	12408.17	PV	Mud flats along the northwest most channel into North Bay during pupping season.



Grays Harbor

Map 3B: Grays Harbor-Central



Grays Harbor

Map 3B: Grays Harbor-Central

ID	Location	Latitude	Longitude	Species	Description
58	Whitcomb Flats N	46 54.98	124 04.64	PV	Along north side of Whitcomb Flats.
59	E of Whitcomb Flats	46 55.04	124 02.27	PV	Along south side of shoal east of Whitcomb Flats during pupping season.
60	E of Whitcomb Flats	46 54.81	124 03.02	PV	Along south side of shoal east of Whitcomb Flats during pupping season.
61	E of Whitcomb Flats	46 54.43	124 02.88	PV	On shoal southeast of Whitcomb Flats.
62	Midharbor Flats	46 56.93	123 58.42	PV	On shoals on north side of midharbor flats during pupping season.
63	Midharbor Flats	46 56.32	123 59.94	PV	On shoals on northwest side of midharbor flats during pupping season. Nursery area.
64	Midharbor Flats	46 56.11	123 56.89	PV	Shoals along south side of midharbor flats during pupping season.
65	Sand Island Shoals	46 57.35	123 59.81	PV	On east side of shoal near rangefinders during pupping season. Nursery area.
66	Sand Island Shoals Area	46 57.50	123 59.92	PV	On north side of shoal near rangefinders during pupping season.
67	Sand Island Shoals Area	46 56.88	124 01.13	PV	On south side of south shoal during pupping season.
68	Sand Island Shoals Area	46 56.91	124 01.61	PV	On north side of south shoal.
69	Sand Island Shoals Area	46 57.11	124 02.05	PV	On north side of middle shoal during pupping season.
70	Sand Island Shoals Area	46 57.19	124 01.42	PV	Along southeast side of middle shoal during pupping season.
71	Sand Island Shoals Area	46 56.71	124 02.15	PV	Along south side of middle shoal.
72	Sand Island Shoals Area	46 56.45	124 02.81	PV	Along southwest side of middle shoal during pupping season.
73	Sand Island Shoals Area	46 57.03	124 02.42	PV	On south side of the north shoal during pupping season.
74	S Side of Sand Island	46 57.38	124 02.90	PV	Shoals across channel on south side of island. Nursery area.
75	S of Sand Island	46 57.58	124 03.07	PV	Along channel on south side of island. Nursery area.
76	S Side of Sand Island	46 57.26	124 03.31	PV	Along channel on south side of island. Nursery area.
77	S Side of Sand Island	46 58.03	124 02.09	PV	Along channel on south side of island. Nursery area.
78	S Side of Sand Island	46 57.61	124 03.40	PV	Along channel on south side of island. Nursery area.
79	N Side of Sand Island	46 57.82	124 03.37	PV	Along channel on north side of island. Nursery area.
80	NW of Sand Island	46 58.01	124 03.83	PV	On northwest tip of Sand Island.
81	NW of Sand Island	46 57.68	124 03.99	PV	Shoals west of Sand Island during pupping season.
82	S Side of Goose Island	46 58.56	124 03.85	PV	Along channel on the south side of Goose Island. Nursery area.
83	NW End of Goose Island	46 58.91	124 04.27	PV	Northwest tip of Goose Island during pupping season.



Grays Harbor

Map 3C: Grays Harbor-South



Grays Harbor

Map 3C: Grays Harbor-South

<u>ID</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
57	South Bay	4652.83	12404.08	PV	Along intertidal channels on east side of bay.
58	Whitcomb Flats N	4654.98	12404.64	PV	Along north side of Whitcomb Flats.
59	E of Whitcomb Flats	4655.04	12402.27	PV	Along south side of shoal east of Whitcomb Flats during pupping season.
60	E of Whitcomb Flats	4654.81	12403.02	PV	Along south side of shoal east of Whitcomb Flats during pupping season.
61	E of Whitcomb Flats	4654.43	12402.88	PV	On shoal southeast of Whitcomb Flats.



Harbor seals on beach on north side of Whitcomb Flats, June 4, 1992.



Region 4: Olympic Coast-South

Use NOAA Charts 18500 (Columbia River to Destruction Island) and 18480 (Approaches to Strait of Juan de Fuca-Destruction Island to Amphitrite Point) for navigation and bathymetry details.

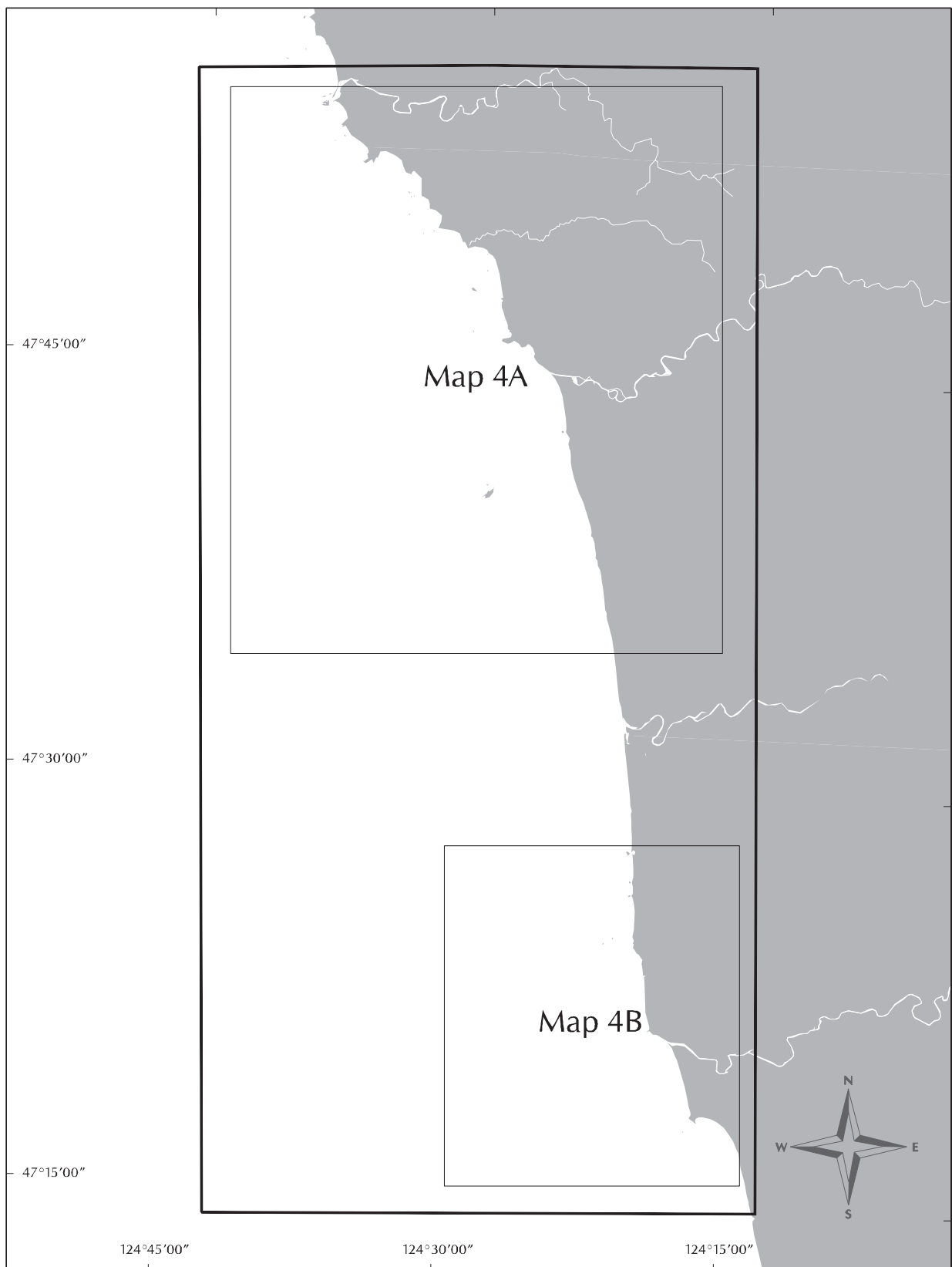
Numerous harbor seal haulout sites are located on intertidal rocks and reefs in this region. Peak abundances of harbor seals occur during the pupping season (June through early August) and annual molt (mid-August through September). Large numbers of Steller sea lions use a number of offshore rocks in the vicinity of Split Rock seasonally. Small numbers of California sea lions may also be found at these same sites.



Harbor seals resting on cobble beach on east end of Destruction Island, November 18, 1997.

Olympic Coast-South

Region 4: Quillayute River to Point Grenville



Region 4: Olympic Coast-South

<u>ID</u>	<u>Location</u>	<u>Survey Code</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Count</u>	<u>Use</u>
102	Cape Elizabeth	04.01	47 21.32	124 19.19	PV	100-500	LOW
103	S of Split Rock	04.02	47 23.99	124 21.58	EJ,ZC	100-500	ALL
104	Split Rock Area	04.03	47 24.39	124 21.76	EJ,ZC	100-500	ALL
105	Split Rock Area	04.03	47 24.44	124 21.50	EJ	<100	ALL
106	Split Rock Area	04.03	47 24.32	124 21.47	EJ	<100	ALL
107	Sea Lion Rock	04.04	47 27.00	124 24.20	PV	<100	LOW
108	Destruction Island/W End	04.05	47 40.35	124 29.30	PV	<100	LOW
109	Destruction Island/NE End	04.06	47 40.73	124 28.76	PV,MA	100-500	LOW
110	Islet N of Hoh River	04.07	47 45.23	124 27.24	PV	100-500	LOW
111	Alexander Island	04.08	47 47.90	124 30.23	PV	<100	LOW
112	Goodman Creek Area	04.09	47 49.24	124 30.66	PV	100-500	LOW
113	S of Toleak Point	04.10	47 49.64	124 32.15	PV	100-500	LOW
114	Toleak Point	04.11	47 49.96	124 32.60	PV	100-500	LOW
115	N of Toleak Point	04.12	47 50.24	124 32.65	PV	<100	LOW
116	Strawberry Point	04.13	47 50.70	124 33.30	PV	100-500	LOW
117	Giants Graveyard	04.14	47 51.18	124 34.00	PV	100-500	LOW
118	Giants Graveyard	04.14	47 51.01	124 33.76	PV	100-500	LOW
119	NE of Giants Graveyard	04.15	47 51.61	124 33.74	PV	<100	LOW
120	S Side Teawhit Head	04.16	47 52.26	124 36.37	PV	<100	LOW
121	Quillayute Needles	04.17	47 53.02	124 38.08	PV	100-500	LOW
122	Point Grenville	04.18	47 18.09	124 16.55	PV	<100	LOW
123	Kalaloch Rocks	04.20	47 36.11	124 22.71	PV	<100	LOW
124	Perkins Reef Area	04.21	47 46.79	124 29.63	PV	<100	LOW
125	Flat Rock	04.22	47 22.68	124 20.72	PV	<100	LOW
126	Willoughby Rock	04.23	47 24.64	124 21.20	PV	<100	LOW



Harbor seals hauled out on rocks north of Hoh River, April 22, 1977.

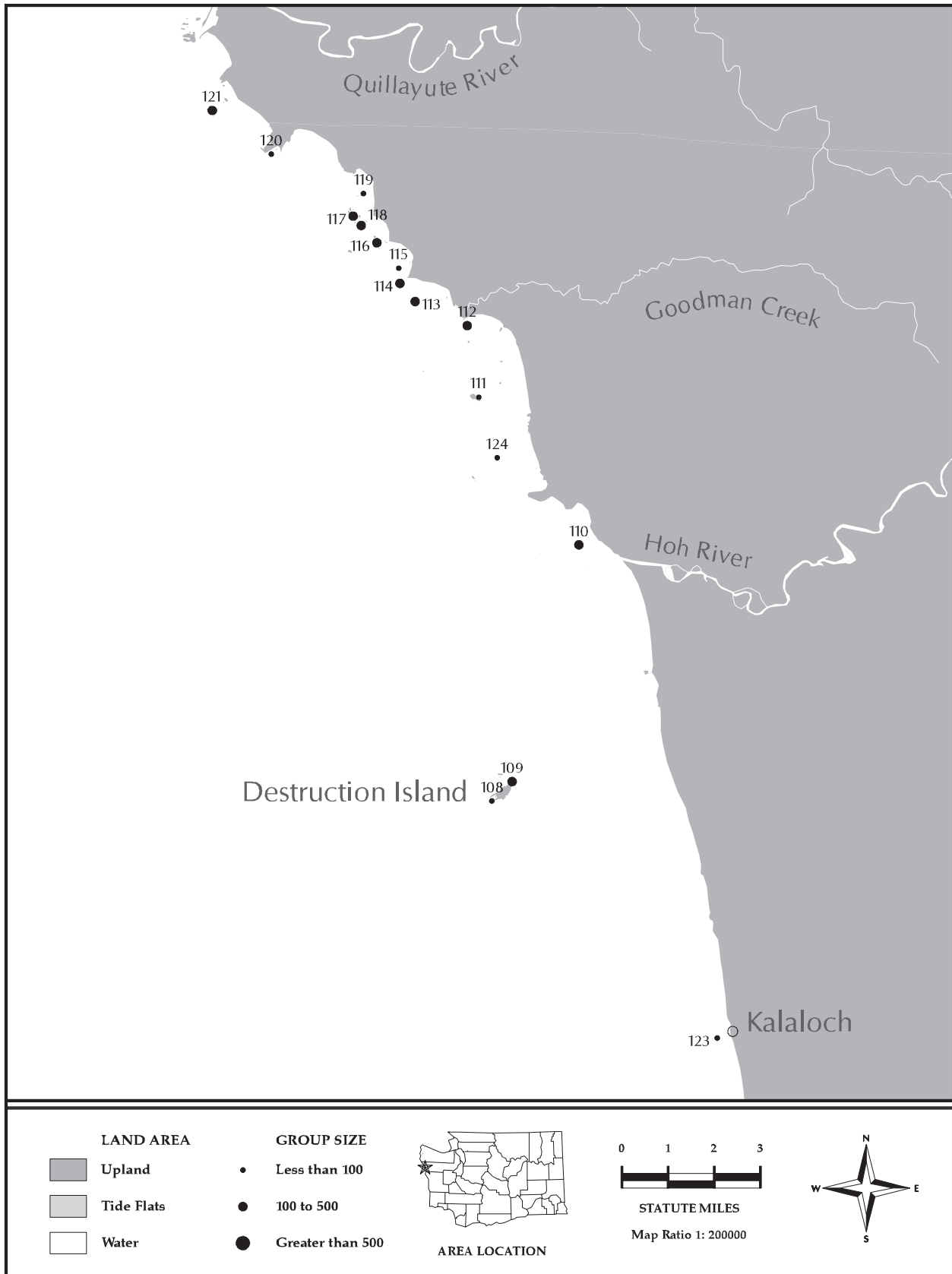
Region 4: Olympic Coast-South

<u>ID</u>	<u>Description</u>
102	Intertidal reef areas off Cape Elizabeth.
103	Unnamed rock (USFWS ID 535) south of Spit Rock.
104	Along the west and south sides of Split Rock.
105	Small intertidal rock (USFWS ID 533) to east of Split Rock.
106	Small intertidal rock (USFWS ID 534) to east of Split Rock.
107	Sea Lion Rock (USFWS ID 502) about 3 miles northwest of Split Rock.
108	Along intertidal channel and reef areas on west end of island.
109	On intertidal reefs and main beach area on the northeast end of island. MA's in winter and spring.
110	On intertidal reefs just north of the Hoh River.
111	Intertidal areas along the east side of Alexander Island.
112	Intertidal rocks on south side of Goodman Creek.
113	Intertidal reef area south of Toleak Point.
114	Intertidal reef areas at Toleak Point.
115	Intertidal reefs and rocks in bay north of Toleak Point. Nursery area.
116	Intertidal areas at Strawberry Point.
117	Intertidal areas at Giants Graveyard. Nursery area.
118	Intertidal areas at Giants Graveyard. Nursery area.
119	Intertidal areas northeast of Giants Graveyard during pupping season.
120	Intertidal reef areas along the south side of Teawhit Head.
121	Intertidal areas on west side of Quillayute Needles.
122	Intertidal areas at Point Grenville. Intermittent use.
123	Intertidal reef area at Kalaloch Rocks. Intermittent use.
124	Reef areas inshore from Perkins Reef. Intermittent use.
125	Flat Rock (USFWS ID 539). Intermittent use.
126	South side of Willoughby Rock on intertidal rocks and reefs.



Olympic Coast-South

Map 4A: Quillayute River to Kalaloch



Olympic Coast-South

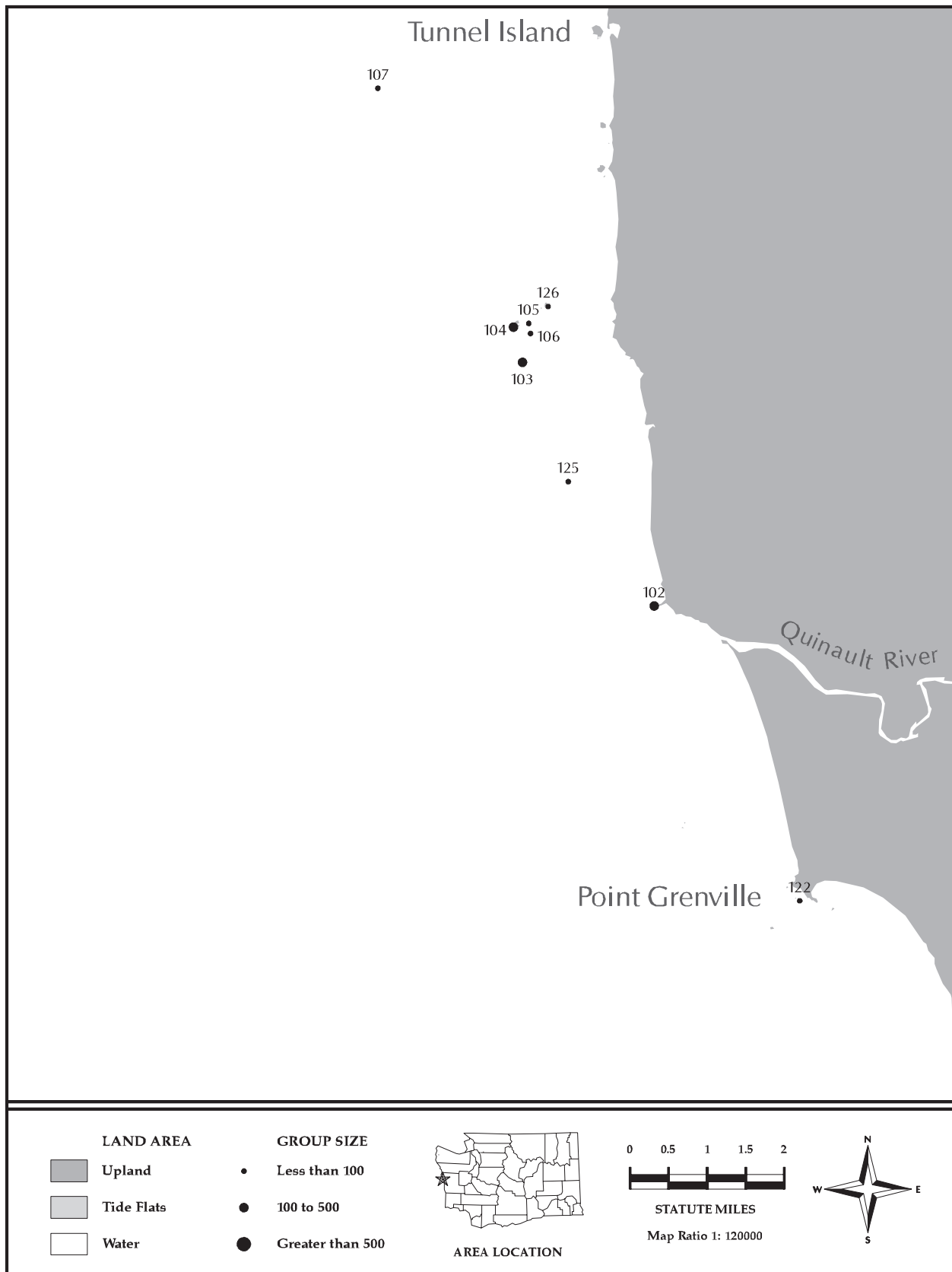
Map 4A: Quillayute River to Kalaloch

ID	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
108	Destruction Island/W End	47 40.35	124 29.30	PV	Along intertidal channel and reef areas on west end of island.
109	Destruction Island/NE End	47 40.73	124 28.76	PV,MA	On intertidal reefs and main beach area on the northeast end of island. MA's in winter and spring.
110	Islet N of Hoh River	47 45.23	124 27.24	PV	On intertidal reefs just north of the Hoh River.
111	Alexander Island	47 47.90	124 30.23	PV	Intertidal areas along the east side of Alexander Island.
112	Goodman Creek Area	47 49.24	124 30.66	PV	Intertidal rocks on south side of Goodman Creek.
113	S of Toleak Point	47 49.64	124 32.15	PV	Intertidal reef area south of Toleak Point.
114	Toleak Point	47 49.96	124 32.60	PV	Intertidal reef areas at Toleak Point.
115	N of Toleak Point	47 50.24	124 32.65	PV	Intertidal reefs and rocks in bay north of Toleak Point. Nursery area.
116	Strawberry Point	47 50.70	124 33.30	PV	Intertidal areas at Strawberry Point.
117	Giants Graveyard	47 51.18	124 34.00	PV	Intertidal areas at Giants Graveyard. Nursery area.
118	Giants Graveyard	47 51.01	124 33.76	PV	Intertidal areas at Giants Graveyard. Nursery area.
119	NE of Giants Graveyard	47 51.61	124 33.74	PV	Intertidal areas northeast of Giants Graveyard during pupping season.
120	S Side Teawhit Head	47 52.26	124 36.37	PV	Intertidal reef areas along the south side of Teawhit Head.
121	Quillayute Needles	47 53.02	124 38.08	PV	Intertidal areas on west side of Quillayute Needles.
123	Kalaloch Rocks	47 36.11	124 22.71	PV	Intertidal reef area at Kalaloch Rocks. Intermittent use.
124	Perkins Reef Area	47 46.79	124 29.63	PV	Reef areas inshore from Perkins Reef. Intermittent use.



Olympic Coast-South

Map 4B: Tunnel Island to Point Grenville



Olympic Coast-South

Map 4B: Tunnel Island to Point Grenville

<u>ID</u>	<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Species</u>	<u>Description</u>
102	Cape Elizabeth	47 21.32	124 19.19	PV	Intertidal reef areas off Cape Elizabeth.
103	S of Split Rock	47 23.99	124 21.58	EJ,ZC	Unnamed rock (USFWS ID 535) south of Spit Rock.
104	Split Rock Area	47 24.39	124 21.76	EJ,ZC	Along the west and south sides of Split Rock.
105	Split Rock Area	47 24.44	124 21.50	EJ	Small intertidal rock (USFWS ID 533) to east of Split Rock.
106	Split Rock Area	47 24.32	124 21.47	EJ	Small intertidal rock (USFWS ID 534) to east of Split Rock.
107	Sea Lion Rock	47 27.00	124 24.20	PV	Sea Lion Rock (USFWS ID 502) about 3 miles northwest of Split Rock.
122	Point Grenville	47 18.09	124 16.55	PV	Intertidal areas at Point Grenville. Intermittent use.
125	Flat Rock	47 22.68	124 20.72	PV	Flat Rock (USFWS ID 539). Intermittent use.
126	Willoughby Rock	47 24.64	124 21.20	PV	South side of Willoughby Rock on intertidal rocks and reefs.



Steller sea lions on unnamed rock (USFWS ID 535) just south of Split Rock, August 2, 1978.